UNITED STATES DEPARTMENT OF AGRICULTURE

FOREST SERVICE

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PROPOSED ACTION PROGRAM

Black Hills Beetle Control

Dixie National Forest

Prepared by

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February 15, 1951

M—5123

U. S. GOVERNMENT PRINTING OFFICE

8—7417

ACKNOWLEDGEMENT

Acknowledgement is hereby made to Paul Grossenbach, Les Orr, Dick Washburn, Rangers Cuskelly, Williams, and Bentley and to Forest Supervisor Albertson for their assistance in drawing up this plan.

PROPOSED ACTION PROGRAM

BLACK HILLS BEETLE CONTROL

DIXIE NATIONAL FOREST

Objectives: To hold to a minimum the losses from Black Hills Beetle in the ponderosa pine stands of the Dixie National Forest.

History:

1919 to 1923	13.4 million board feet loss from beetle.
1936 to 1943	13.7 million board feet loss from beetle.
1950 to 1953	2.6 million board feet loss from beetle.

Characteristics of the Beetle on the Dixie

a. Black hills beetle follows a pattern of build up on the Dixie of from three to four new strikes from every old strike. This amounts to a build up loss in uncontrolled timber of around 27 trees in a three year period. When control work is carried on the build-up is held to about one to one during the peak of the infestation which amounts to a loss of three trees over a three year period following a single strike.

b. The present infestation now consists of extremely heavy broods. The beetles are very active and the build-up potential is great. It is probable that they are near the peak of their cycle of infestation.

c. Control work to date has been considered good in that the build-up has been held to better than one to one. However, the build-up we have has occurred largely in the fringe areas where infested trees have not been treated due to being so widely scattered that the areas were considered to be in an endemic state. Each year the area included becomes larger and includes the build-up in the fringe areas which makes it appear as though control work is relatively ineffective whereas this is not the case.

Assistance Received from Timber Operators

a. Timber operators have been apprehensive about the condition and have offered as much assistance as they find it economically possible to give. The Mammoth Lumber Company has put two Tractor crews out on the Rock Canyon unit to salvage bug trees when the forest marks enough green timber in the localities of the infested trees to make a load in each place. This Company assisted in control work last year to the extent of taking over 600 trees, sawing them into lumber and burning the slabs. This year we estimate that they will be able to get 900 trees. They even offer to spray odd trees if too small to log.

b. The Crofts Lumber Company dropped their regular logging operation last year and put their tractors, loader, and trucks into the bug timber for a two week period, taking out over 200 trees from the Bowers Flat unit. This year they are willing to help again and can do as well or better than last year.

c. The Colvin mill went in on the East Fork unit of the Sevier drainage last fall and took out 100 insect infested trees.

d. The Alvey mill at Escalante took 50 bug trees out of Pine Creek last fall.

e. The Panguitch Lumber Company worked for nearly a month salvage logging on the Haycock Mountain unit during the spring of 1953.

Justification

a. This year the survey indicates the existence of 6000 trees. Next year the build-up without control can reasonably be expected to be from 18,000 to 24,000 trees. If let run its course, any control measures undertaken at a later date would be astronomical as to cost. If let go, the loss to the timber economy of this forest would be great and to those depending on the watersheds for irrigation water the results of accelerated erosion could be paralyzing.

b. It is conservatively estimated that the Dixie contains half a billion board feet of timber. Twenty-three sawmills now operate on National Forest timber. Over 250 families depend for 50 percent or more of their livelihood on the local timber industry and many others to a lesser degree.

c. Last year 242,820 persons visited Bryce Canyon National Park and 389,445 visited Zion National Park. Most of these people pass through the Dixie National Forest and partake of recreational facilities located therein.

d. One of the highest per acre populations in the United States lives on the irrigated lands in Sevier Valley and are largely dependent upon the Dixie watersheds for their water.

e. The erosive nature of the Upper East Fork drainage and the delicate balance between soil and vegetation thereon makes it mandatory that an all out effort be made to prevent the upsetting of this balance through loss of tree cover.

Over-All Program

In view of the uncertainty of funds for control work this year and in the future we propose to attack the problem from two angles, namely: to hold

the loss to as low a point as possible through use of allotted funds and to increase our annual cut in order to salvage the loss and remove the more susceptible host potential.

A. Program with allotted funds F.Y. 1954.

1. Escalante District (Pine Creek). Clean up intensive new infestation by regular control methods of treating with Ethylene Dibromide - 250 trees in approximately 2000 acres.
Estimated Cost $3,000.00

2. East Fork Sevier River (Powell District). No control before July 1. Maximum possible removal by timber operators - 450 trees by salvage logging.
Estimated cost of spotting and supervising removal $1,400.00

3. Panguitch Lake District (Rock Canyon-Haycock Mountain.) No control work before July 1. Maximum possible removal by timber operators - 900 trees.
Estimated cost by July 1 spotting and logging supervision. $4,000.00

4. Navajo Lake District (Mammoth Unit). No control work before July 1. Maximum possible removal by timber operators - 500 trees.
Estimated cost by July 1 - spotting and logging supervision. $2,500.00

5. Total Allotted funds needed before July 1. $10,900.00

B. Program with allotted funds F.Y. 1955.

1. Program will aim to complete control work by August 1, 1954.

2. An all-out effort will be made to put together 25 3-man mobile treating crews for fast completion of control work in July. Spotting will be done by plane on a color spot basis. Aerial pictures will be used to spot and locate the trees.

3. Treating will be contracted in all cases where it is possible.

4. Enough Ethylene Dibrome to run the first two weeks of July would need be on hand to start the work on schedule. This is why assurance should be had by June 20 at the latest that 1955 F.Y. funds will be made available. Delivery could not be expected in less than two weeks time.

5. Three thousand five hundred trees would need be treated at an estimated cost of $35,000. These trees would be scattered over 52 thousand acres of broken forest lands.

C. Program of Hazard Reduction through increased sales.

1. Objective - to minimize the necessity for control within a 3-year period. The Dixie proposes to complete the cutting of all virgin ponderosa pine areas as soon as possible consistent with ability of the present organization to handle the sales program and industry to absorb the products. This to be done with the least possible increase of total allowable cut so as not to encourage new industry into an already overcrowded area.

   Cutting in mixed stands will be discontinued or at least cut to a minimum with an equal or greater cut concentrated in the ponderosa pine stands.

   a. Powell District (East Fork of Sevier River). Change the cut from mixed stands to pine stands and prepare one additional sale this year above the two sales already planned. F.Y 1955 P&M 030 money needed to accomplish $775.00.

   b. Panguitch Lake District (Rock Canyon). Cruise 6,000 acres of heavily infested timber, appraise and advertise for cutting in F.Y. 1955 and 1956. Increase allowable annual cut from 300 M board feet to two million board feet per year. Additional F.Y. 1955 P&M 030 money needed to mark and administer this sale $650.00 per year.

      Help from the R.O. will be needed the fourth week of April 1954 to appraise this timber.

   c. Navajo Lake District (Mammoth Unit). Increase the cut on present sales to get over the ground faster. Can absorb 1/2 million board feet additional timber in this manner. Additional P&M 030 needed $300.00 per year.

   d. The Dixie's annual allowable cut is 10 million board feet a year. It is proposed to raise this to 12.7 million providing P&M 030 funds can be made available to help meet this goal. The Rangers will alter their field plan of work such that they will do part of this additional sales work at the expense of spending lesser amounts of time on other functions than they now do. The balance of approximately $1200.00 per year will necessarily have to be provided by special allotment.

   e. The impact on the economy when the cut necessarily must be decreased will be somewhat shocking, however, we must risk this future eventuality in light of the urgent need of the present time.

Prospects for the future

1. Control program: There may often be need for small scale maintenance control on the slopes too steep and too erosive to log. Bryce Canyon Park timber likewise ties in closely with the East Fork stands and infestation from there can reasonably be expected to occur.

2. Since the beetle, when aggressive, attacks the younger age classes it is probable that some control will be needed even in the cut-over stands at some future time.

3. Another period of endemic beetle activity can be expected after the present aggressive epidemic subsides.